

## **IN THE SPECIFICATION:**

Please amend the specification as follows:

Page 15 to the top of page 16, replace the first full paragraph as follows:

--Therefore a partition may be provided in the inner region 7 inside the annular partition 8 as a flow straightening member for reliably separating zones as required. In this embodiment, partitions 12 which narrow an opening on the outlet side relative to an opening on the inlet side through which the circulating flow flows in are mounted to the roof 4 by means of a cover 13 for the axial-flow fan 11. In this case, the angle  $\theta_2$  of the outlet opening of the inner region 7 defined by the partitions 12 in the vicinity of the hearth [[4]] 2 is reduced relative to the angle  $\theta_1$  of the inlet opening of the inner region 7 in the vicinity of the roof 4 to increase the circulating gas flow velocity by the reduction in the opening area, thus enabling part of the high-temperature gas blown out from the axial-flow fan 11 to be supplied to the heating-target mount 23 while increasing the flow velocity thereof. If there is no need to change the flow velocity (heated condition) of the circulating flow in an internal portion of the furnace, and if there is only a need for more definite zone separation, partitions for straight partitioning (not shown) such that the inlet opening angle  $\theta_1$  and the outlet opening angle  $\theta_2$  are equal to each other are used.--

Page 17 to page 19, replace the second paragraph as follows:

--On the rotating hearth 2 in the outer peripheral region 6, the annular heating-target mount 23 is provided along the peripheral wall 3. The heating-target

mount 23 is provided with a heating-target mount shelf 24 which is at least a simple shelf with no outer peripheral wall, on which a heating-target is placed so as to be loadable and extractable outwardly in a diametric direction (radial direction), and through which the circulating flow can pass along a vertical direction. Preferably, heating-target mount shelves 24 are provided in a plurality of stages. The number of heating-targets processible at a time is increased in correspondence with the number of shelves to enable high-volume processing. Preferably, partitions 25 for maintaining vertical hot-air flow paths between the plurality of heating-target mounts ~~[[24]]~~ 23 are provided on the heating-target mount 23. In this mode of implementation, partitions 25 are radially placed on the annular heating-target mount 23 to partition the heating-target mount 23 in the circumferential direction to provide heating-target accommodation spaces 22. Since a small leak of hot air is not a problem with the zone partitions, a simple structure in which thin iron plates are inserted in vertical grooves or slits extending from the hearth 2 toward the roof 4 may suffice. This support permits free expansion of the partitions 25. For example, partitions 25 formed of steel plates are expandably supported by being inserted in steel channels disposed at the inner and outer sides of the heating-target mount 23 and extending vertically or in slits or the like opened in the vertical direction. Needless to say, each of the components disposed in the furnace, including the heating-target mount 23, the annular partition 8, the partitions 12 for zone separation and the cylindrical member 14, is formed of a suitable material, e.g., heat-resisting steel according to the temperature and the composition of the circulating hot gas. The independent heating-target accommodation spaces 22 are formed on the shelves at positions corresponding to each other in the vertical direction

to provide vertical communication paths. Hot air moving upward therein can be regulated so as not to flow into any of the adjacent heating-target accommodation spaces 22, thereby maintaining the circulating flows passing through generally fixed positions as a whole even if the circulating flows are disturbed by contact with the heating-target. In this way, zone separation is further facilitated even though only one axial-flow fan is provided.--